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E & E Preliminary Assessment and Site Inspection of the Collis Corporation

Collis, Clinton, Ia
ID. IAD[illegible]7
Year: 81
Other: 1-12-81

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The Collis Corporation of Clinton, Iowa, is a subsidiary of Chamberlain Manufacturing Corporation and manufacturers chrome plated wire products. This site was identified through an NPDES inspection conducted by EPA. The three major waste components are chrome, cyanide, and zinc. Present plant operations combine the cyanate waste and chromium wastes (reduced to trivalant chromium), and the waste stream enters a sedimentation basin. Lime is added to aid in precipitation. The supernatant from this basin is discharged through an earth filter and into a drainage ditch which runs into Mill Creek and ultimately the Mississippi River. The sludge is then dewatered and disposed of in a landfill in Illinois. In the past (1971-80) the sludge was deposited in six unlined disposal pits located on the site. The sludge is currently being removed from these pits. Groundwater is 0-2 feet below the bottom of the pits. The site is an old riverbed with primarily sands and silts. Past dumpings of metal shavings south of the pits have leached oil into two of the sludge pits. Past inspections by the state have indicated violations of the treatment plant effluent standards, excessive discharge concentrations from the earth filter, spills of waste materials and a fish kill. The EPA has also observed sludge accumulations in the drainage creek (September 2, 1980).

E & E conducted a preliminary assessment and site inspection of the Collis Division on November 17, 1980. This inspection was a result of a possible worker hazard. During removal of sludge from the six existing pits on the site, workers noticed a strong ammonia smell and within two hours had developed nausea and headaches.

E & E collected samples from the treatment plant effluent, the sludge dumpster and a disposal pit. Tests results have not yet been received. The cyanide sludge can decompose to ammonia and cyanide gas, which can be inhaled and absorbed through the skin. Once the pits are emptied, Collis intends to use them for sedimentation lagoons and to use sodium hydroxide instead of lime to aid in precipitation. This precipitate is more difficult to settle than that from lime. Although this waste has a much higher liquid content than the sludge, there are no plans to install a liner in these lagoons. The possibility of leaching is therefore increased.

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SUPERFUND RECORDS

ARHM/HAZM-TSS:GNowacki:lmh:x6531:1-12-81

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DATE	1/12/81	1/13/81						

EPA Form 1320-1 (12-70) OF

E & E has concluded that the drainage creek adjacent to Collis has been contaminated by runoff, sludge overflows, effluent discharges, and possible leachate. Should Collis operate their treatment system correctly, a majority of these problems would be eliminated. However, of concern is Collis's past violation record and future use of the pits as sedimentation ponds. If this occurs, it is recommended that shallow wells be placed around the pit and a containment system for runoff be installed.

E & E does not indicate how serious they feel this problem is on the inspection form. Until lab results are received it would be difficult to determine what if any action should be taken against Collis. Due to their past record there appears to be a problem at the site and remedial or clean up action is warranted.